

1. Identification of substance/mixture and of the company/undertaking**1.1 Product identifier** **Granalox® NM ZTA 12**

REACH-Registration-No.	Aluminum oxide	01-2119529248-35-0036
	Inorganic additives	Pre-registered: 05-2114103627-55-0000
	Polymeric additives	Exempted from registration according to article 2 § (9)

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant uses Ceramics, refractory industry

1.2.2 Uses advised against None known

1.3 Details of the supplier of the safety data sheet

<i>Manufacturer/Supplier</i>	Nabaltec AG
<i>PB No./street:</i>	Postfach 1860
<i>Postal code/city</i>	92409 Schwandorf
<i>Country</i>	Germany
<i>Telephone</i>	0049 9431 530
<i>Telefax</i>	0049 9431 61557
<i>e-mail</i>	info@nabaltec.de

1.4 Emergency telephone number

0049 9431 53222 (24h); (german)

2. Hazards identification**2.1 Classification of the substance or mixture**

<i>Classification according Regulation (EC) No 1272/2008 [CLP]</i>	Not classified
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<i>Classification according Directive 67/548/EEC or Directive 1999/45/EC</i>	Not classified
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2.2 Label elements

<i>Hazard pictogram</i>	None
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<i>Signal word</i>	None
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<i>Hazard statement</i>	None
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Precautionary statements (recommended)

Although this product is not hazardous, we recommend that the safety advice should be observed.

P261: Avoid breathing dust

P280: Wear eye protection

P285: In case of inadequate ventilation wear respiratory protection

P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

P302+352: IF ON SKIN: Wash with soap and water

2.3 Other Hazards

<i>Human health dangers</i>	Prolonged or excessive contact may cause irritation of the respiratory tract.
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<i>Physico-chemical hazards</i>	None known
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<i>Environmental hazards</i>	Does not contain any PBT or vPvB substances.
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<i>Other hazards</i>	None known
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3. Composition/information on ingredients

Product type The product is a mixture

Chemical name	CAS No.	EC No.	REACH-Registration No.	Weight [%]
Aluminum oxide	1344-28-1	215-691-6	01-2119529248-35-0036	80 - 88
Inorganic additives	--	--	Pre-registered	< 12
Polymeric additives	--	--	Not applicable	< 5

Comment on component parts No dangerous components. Does not contain any SVHC substances.

4. First aid measures

Inhalation Move to fresh air. Consult a physician if necessary.
Skin contact Mechanical (dry) removal. Subsequent rinsing with water.
Eye contact Intensive rinsing with water. Consult a physician if necessary.
Ingestion Rinse out mouth and give plenty of water to drink. Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

None known

4.3 Indication of any immediate medical attention and special treatment needed

None known

5. Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media Product itself is non-combustible. Use extinguishing measures appropriate to the source of the fire.

Unsafe extinguishing media None

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. In case of exposure to high levels of airborne dust, wear a personal respirator in compliance with national legislation.

6.2 Environmental precautions

Avoid to discharge into the drains/surface waters/groundwater

6.3 Methods and material for containment and cleaning up

Take up mechanically. Dispose material in accordance within the regulations.

6.4 Reference to other sections

See chapter 8 and 13

7. Handling and storage**7.1 Precautions for safe handling**

Advice on safe handling Avoid dust formation. No special handling advice required.

Advice on protection against fire and explosion

Not explosive. No special measures necessary.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in dry place.

7.3 Specific and use(s)

See product information.

8. Exposure controls/personal protection

8.1 Control parameters Observe the local by-laws in terms of fine dust:
(e.g.: OSHA-PEL value 15 mg/m³ total dust, 5 mg/m³ for respirable dust; ACGIH-TWA value 10 mg/ m³, TRGS 900 10 mg/m³ respirable, 3 mg/m³ alveolar)

Exposure limits for consumers Not applicable

DNEL

Range %	Substance
80 - 88	Aluminum oxide; CAS: 1344-28-1
	Industrial, inhalative, long-term - local effects: 15,63 mg/m ³
	Industrial, inhalative, long-term - systemic effects: 15,63 mg/m ³

8.2 Exposure controls

Technical controls Avoid dust formation. Appropriate local exhaust ventilation recommended.

Personal protection controls:

Respiratory protection Avoid inhaling the dust. In case of insufficient ventilation and exposure to high levels of airborne dust, wear suitable respiratory equipment. Recommended filter type: Filter P2 (acc. to DIN 3181)

Hand protection Protective gloves are recommended

Glove material: Nitril rubber

Layer thickness: 0.11 mm

Breakthrough time: > 480 Min

Eye protection Safety glasses with side-shields (frame goggles) are recommended

Skin protection Light protective clothing

Hygiene measures Do not eat, drink or smoke when handling. Observe standard industrial hygiene practice

Environmental exposure controls

No special exposure controls required.

9. Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Physical state: Granules
Color: White
Odor: Odorless
pH: Not applicable
Solubility in water: < 0,00002 g/l at 20 °C
Density: Not determined
Vapor pressure : Not applicable
Boiling point: 2980°C
Melting point: 2050°C
Flash point : Not applicable
Flammability: Not flammable
Auto ignition: Not auto flammable
Explosive properties: Non explosive
Oxidizing properties: No
Thermal decomposition : Not applicable
Octanol-Water coefficient: Not applicable
Viscosity Not applicable

9.2 Other information None

Safety Data Sheet

according to Regulation 1907/2006 REACH and Regulation 1272/2008 GHS

Revision: 2

10. Stability and reactivity

10.1 Reactivity	No known, if used properly.
10.2 Chemical stability:	Stable under normal conditions.
10.3 Possibility of hazardous reactions	No hazardous reactions known.
10.4 Conditions to avoid	None
10.5 Incompatible materials	None
10.6 Hazardous decomposition products	In case of fire traces of carbon oxides (CO, CO ₂) may be released.

11. Toxicological information

11.1 Information on toxicological effects

Acute effects	Value	Species	Type	Test substance
<i>Oral</i>	>2000 mg/kg bw	rat	acute	Analogue
<i>Dermal</i>	Not applicable.		acute	
<i>Inhalation</i>	LC50: 7,6 mg/l	rat	acute	Analogue
<i>Skin corrosion</i>	Not corrosive	rabbit	acute	Analogue
<i>Skin irritation</i>	Not irritating	rabbit	acute	Analogue
<i>Eye irritation</i>	Not irritating	rabbit	acute	Analogue
<i>Sensitisation</i>	Not sensitising			

Repeated dose toxicity	Value	Species	Type	Test substance
<i>Oral</i>	Not applicable. Not a relevant exposure route.			
<i>Inhalation</i>	NOAEL: 70mg/m ³	rat	sub-chronic	Analogue

<i>Carcerogenity</i>	There is no evidence of any carcinogenic effects
<i>Mutagenity</i>	There is no evidence of any mutagenic effects
<i>Reproductive toxicity</i>	There is no evidence of any reproductive toxicity effects

12. Ecological information

12.1 Toxicity

Test	Value	Species	Type	Test substance
<i>Fish toxicity</i>	Study scientifically unjustified			
<i>Invertebrate toxicity</i>	Study scientifically unjustified			
<i>Algae toxicity</i>	Study scientifically unjustified			
<i>Micro-organism toxicity</i>	Study scientifically unjustified			

12.2 Persistence and degradability	Not applicable for inorganic substances
12.3 Bioaccumulative potential	Not applicable
12.4 Mobility in soil	Not applicable
12.5 Results of PBT and vPvB assessment	As a result of the PBT/vPvB assessment it is found that the product does not meet the criteria for classification as PBT or vPvB.
12.6 Other adverse effects	None known

13. Disposal considerations

13.1 Waste treatment methods

<i>Spoiled packages</i>	Reuse or recycle when possible. Dispose of in accordance with local regulations.
	Packaging has to be emptied entirely. Recycling of used packaging is recommended. Local by-laws must be observed.

Safety Data Sheet

according to Regulation 1907/2006 REACH and Regulation 1272/2008 GHS

Revision: 2

Nabaltec

Date: 17 August 2017

14. Transport information

14.1 UN number	according to UN shipping name, see item 14.2
14.2 Un proper shipping name	
<i>ADR / RID</i>	NOT CLASSIFIED AS "DANGEROUS GOODS"
<i>IMDG</i>	NOT CLASSIFIED AS "DANGEROUS GOODS"
<i>IATA-DGR / ICAO-TI</i>	NOT CLASSIFIED AS "DANGEROUS GOODS"
14.3 Transport hazard class(es)	None
14.4 Packaging group	None
14.5 Environmental hazards	None
14.6 Special precautions for user	See item 6 to 8
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
	No hazardous goods

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations and directives

<i>Regulation (EC) No 2037/2000 (Ozon Depleting Substances)</i>	Not applicable
<i>Regulation (EC) No 850/2004 (Persistent Organic Pollutants)</i>	Not applicable
<i>Regulation (EC) No 689/2008 (Export and import of dangerous substances)</i>	Not applicable
<i>Directive 2002/95/EC (RoHS)</i>	Not applicable
<i>Directive 2002/96/EC (WEEE)</i>	Not applicable
<i>Directive 1999/13/EC (VOC)</i>	Not applicable
<i>Restrictions according TITLE VIII of the Regulation (EC) No 1907/2006 (REACH)</i>	None
<i>Regulation (EC) No 1907/2006 REACH</i>	In compliance
<i>Regulation (EC) No 1272/2008 GHS</i>	In compliance

National legislations

<i>Water pollution class</i>	WGK1 (self assessment)
<i>Classification according VbF</i>	Not classified

15.2 Chemical safety assessment Not applicable

16. Other information

<i>Employment restrictions</i>	None
<i>Exposure scenarios</i>	As a result of the hazard assessment and PBT/vPvB assessment it is found that the preparation GRANALOX, including all components, does not meet the criteria for classification as hazardous (according to Directives 67/548/EEC and 1272/2008/EC) nor is it considered to be a PBT/vPvB. An exposure assessment and the subsequent step of risk characterisation is not required.
<i>Issuer of MSDS</i>	Nabaltec AG
<i>Contact</i>	phone 0049 9431 53298 fax 0049 9431 53289
16.1 Hazard statements	see section 3

This information is based on our present knowledge. This shall not constitute a guarantee for any specific product featured and shall not establish a legally valid contractual relationship.

Safety Data Sheet

according to Regulation 1907/2006 REACH and Regulation 1272/2008 GHS

Revision: 2

16.2 Abbreviations and acronyms

Key-Legend

<i>ACGIH</i>	American Conference of Governmental Industrial Hygienist
<i>OSHA</i>	Occupational Safety & Health Administration
<i>PEL</i>	Permissible exposure limit
<i>TWA</i>	Time Weighted Average
<i>TRGS</i>	Technische Regeln für Gefahrstoffe
<i>NOEL</i>	No Observed Effect Level
<i>NOAEL</i>	No Observed Adverse Effect Level
<i>LC</i>	Letal Concentration
<i>EC</i>	Effective Concentration
<i>ADR</i>	Accord européen sur le transport des marchandises dangereuses par route
<i>IATA-DGR</i>	International Air Transport Association-Dangerous Goods Regulations
<i>ICAO-TI</i>	International Civil Aviation Organization-Technical Instructions
<i>IMDG</i>	International Maritime Code for Dangerous Goods
<i>MARPOL</i>	Maritime Pollution Convention
<i>RID</i>	Règlement international concernant le transport des marchandises dangereuses par chemins de fer
<i>RoHS</i>	Restriction of (the use of certain) hazardous substances
<i>WEEE</i>	Waste Electrical and Electronic Equipment
<i>VOC</i>	Volatile Organic Compounds
<i>VbF</i>	Verordnung über brennbare Flüssigkeiten
<i>DNEL</i>	Derived no effect level
<i>CAS</i>	Chemical Abstracts Service
<i>CLP</i>	Classification, Labelling and Packaging
<i>EC No. / EINECS</i>	European Inventory of Existing Commercial Chemical Substances
<i>GHS</i>	Globally Harmonized System of Classification and Labelling of Chemicals
<i>REACH</i>	Registration, Evaluation, Authorization and Restriction of Chemicals
<i>PBT</i>	Persistent, Bioaccumulative and Toxic substance
<i>vPvB</i>	very Persistent and very Bioaccumulative